

Application No. 10/810,204
Amendment dated January 17, 2006
Reply to Office Action of September 15, 2005

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

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Description of Amendments to the Claims:

Claims 22-25 remain in this application. Claim 22 has been amended.

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Listing of Claims:

Claim 22 (currently amended): A battery charging system, comprising:

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a current source;

a battery;

a voltage and current regulator, which regulates voltage applied to said battery and current supplied to said battery,

said voltage and current regulator comprising: an adjustable band-gap

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voltage reference diode, a voltage divider potentiometer, a resistor, and a transistor;

said adjustable band-gap voltage reference diode in series with said

resistor, said series resistor and said band-gap voltage reference diode

connected across said current source and said battery, said adjustable

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band-gap voltage reference diode having a reference input;

said voltage divider potentiometer connected across said current source

and said battery, said voltage divider potentiometer having an output

connected to said reference input of said adjustable band-gap voltage

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reference diode, and providing a reference input voltage at said reference input to said band-gap voltage reference diode;
said transistor having an emitter and a collector connected across said current source and said battery, said transistor having a base connected to a junction between said series connected resistor and said band-gap voltage reference diode, said band-gap reference diode, said series resistor, and said transistor operating in conjunction with one another to regulate voltage applied to said battery and current supplied to said battery, and
an operational amplifier, which amplifies cutoff voltage and provides an output for use with auxiliary devices.

Claim 23 (previously presented): The battery charging system according to claim 22, wherein further said battery charging system has a switch to control current supplied to said battery by switching said current source on or off.

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Claim 24 (previously presented): The battery charging system according to claim 23, wherein said switch is timer controlled.

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Claim 25 (previously presented): The battery charging system according to claim 24, wherein said timer controlled switch is a microcontroller.